



SMS # 98-2412

Dear Mr. Kingsbury:

Enclosed please find the report detailing the results of soil sampling and analysis and recommendations for limited future work at the Kingsbury Construction shop facility in Fayston, Vermont. If you have any questions, please feel free to contact me at (802) 865-4288.

Sincerely,

Sincerely,  
Walter Doe

Willis Doe  
Environmental Engineer

cc: 69841283

Mr. Chuck Schwer, VTDEC



December 4, 1998

Mr. Richard Kingsbury  
Kingsbury Construction  
Box 1476  
Waitsfield, VT 05673

RE: Subsurface Investigation/Soil Sample Collection, Analysis  
Kingsbury Construction Facility Fayston, Vermont

SMS # 982412

Dear Mr. Kingsbury:

The following letter report has been prepared in response to the September 25, 1998, letter from Chuck Schwer of the Vermont Department of Environmental Conservation (VTDEC), to Mr. Richard Kingsbury of Kingsbury Construction, Waitsfield, Vermont, regarding the underground storage tanks (USTs) removed from the Kingsbury Construction shop facility in Fayston, Vermont. In the letter, the VTDEC requested additional work be performed at the facility to further determine the degree and extent of contamination detected during the UST removals, assess the potential impact to sensitive receptors in the area, and to formulate a plan for treatment and/or monitoring of stockpiled soils at the site. This report addresses these issues and offers recommendations regarding future activity at the site.

#### Site History

On June 18, 1998, one 5000 gallon #2 fuel oil UST and one 6000 gallon diesel fuel UST were removed from the subsurface at the Kingsbury Construction shop facility located on Town Road 13 in Fayston, Vermont. During the removal of the 6000 gallon diesel UST, adsorbed petroleum contamination was detected in the eastern corner of the UST excavation from grade to approximately 3.5 feet below grade. Soil samples collected from this location were screened for the presence of volatile organic compounds (VOCs) using an H-Nu<sup>TM</sup> Model HW-101 photoionization device (PID). VOCs were detected at a concentration of 110 ppm in this area of the excavation. Approximately 4 yd<sup>3</sup> of soil were removed and stockpiled on-site. The UST Closure Report regarding activities at this facility was submitted to the VTDEC on June 24, 1998.

Prior to backfilling the excavation, three soil samples were collected from 4.0', 4.5', and 5.0' below grade directly beneath the area where petroleum contaminated soil had been removed. Each sample was screened for the presence of VOCs using a PID. No VOCs were detected in

any of these samples. The VTDEC subsequently requested the collection of soil samples for laboratory analysis as a means of confirming the removal of all petroleum contaminated soils in this area of the excavation.

### **Sample Collection and Analysis**

Griffin International, Inc., (Griffin) returned to the site on October 15, 1998, to obtain confirming soil samples from the area where contaminated soils were removed on June 18, 1998. One sample was collected from the east corner of the former UST excavation at a depth of 5' below grade, and a second sample was collected from the northeastern side of the same excavation at a depth of 4' below grade. The two samples were collected using a hand auger. To prevent potential cross-contamination of samples, the auger was decontaminated in the field prior to sample collection using a solution of Alconox (a detergent) and water.

The two samples were properly preserved and forwarded to Endyne, Inc., of Williston, Vermont, under signed chain of custody. Samples were submitted for analysis for the presence of BTEX and MTBE by EPA Method 8020 and for TPH by EPA Method 8100 Modified. Neither of the samples submitted indicated the presence of any of the aforementioned compounds above method detection limits. The laboratory results regarding these samples are attached to this report.

### **Potential Impact to Sensitive Receptors**

Potential sensitive receptors in the area include the one downgradient (assumed) water supply well, subsurface soil and groundwater, and Shepard Brook, which is located approximately 1300 feet to the north of the former UST area. None of these receptors would appear to be at risk, as evidence suggests that soils containing adsorbed petroleum contamination were effectively removed during UST closure activities at the site. Impact to groundwater beneath the site would be unlikely, as the extent of contamination was limited to approximately 3.5' below grade. No groundwater was observed in the UST excavations to a depth of 12' below grade.

### **Conclusions**

The contamination present in the subsurface at the site has been effectively removed and stockpiled on-site, based on the following evidence: 1) On June 18, three soil samples were collected from directly beneath the area of removed soil and screened for the presence of VOCs with a PID. No VOCs were detected in these samples. 2) No BTEX, MTBE, or TPH were detected in the soil samples submitted to Endyne for analysis. These samples were collected in the area where contaminated soil had been observed during the removal of the USTs at the site.

### **Recommendations**

Currently, approximately 4 yd<sup>3</sup> of contaminated soil are stockpiled on-site. PID screening of these soils indicate the presence of adsorbed petroleum compounds in concentrations from 10 to 110 ppm. The soil stockpile is located in a remote corner of the site away from normal daily

activity at the shop. The pile is fully encapsulated by polyethylene sheeting and is not near a public area. Griffin International, Inc., recommends that the soil stockpile be left in place at the site and annual monitoring of the soils be initiated. Stockpiled soils will be screened for the presence of VOCs using a PID. Samples for screening should be collected from varying locations and depths within the pile to provide an adequate profile of VOC levels. Monitoring should continue until no VOCs are detected in the soil at levels greater than 1 ppm using a PID. At this time, the soils can be thinspread on-site following the approval of the VTDEC.

Based on evidence gathered during UST closure activities and the results of subsequent soil sampling and analysis, Griffin International, Inc., recommends that no further action be taken at the site, aside from the annual monitoring of the soil stockpile.

Please call me with any questions that you may have regarding this report or the site in general.

Sincerely,

A handwritten signature in cursive script, appearing to read "Willis Doe".

Willis Doe

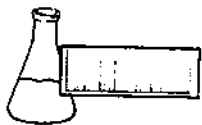
Environmental Engineer

Att

cc: 69841283

Mr. Chuck Schwer, VTDEC

ATTACHMENT I: LABORATORY ANALYTICAL REPORTS



**ENDYNE, INC.**

**Laboratory Services**

32 James Brown Drive  
Williston, Vermont 05495  
(802) 879-4333  
FAX 879-7103

**REPORT OF LABORATORY ANALYSIS**

CLIENT: Griffin International  
PROJECT NAME: Kingsbury Construction  
REPORT DATE: October 29, 1998  
DATE SAMPLED: October 16, 1998

PROJECT CODE: GIKC1341  
REF.#: 129,650 - 129,651

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody did not indicate sample preservation.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



**ENDYNE, INC.**

**Laboratory Services**

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FAX 879-7103

**EPA METHOD 602--PURGEABLE AROMATICS**

CLIENT: Griffin International

DATE RECEIVED: October 21, 1998

PROJECT NAME: Kingsbury Construction

REPORT DATE: October 29, 1998

CLIENT PROJ. #: 69841283

PROJECT CODE: GIKC1341

Ref. #:	129,650	129,651			
Site:	SS #1	SS #2			
Date Sampled:	10/16/98	10/16/98			
Time Sampled:	9:23	9:35			
Sampler:	D. Tourangeau	D. Tourangeau			
Date Analyzed:	10/29/98	10/29/98			
UIP Count:	0	0			
% Solids	89	91			
Dil. Factor (%):	100	100			
Surr % Rec. (%):	85	98			
Parameter	Conc. (ug/kg)	Conc. (ug/kg)			
MTBE	<100	<100			
Benzene	<10	<10			
Toluene	<10	<10			
Ethylbenzene	<10	<10			
Xylenes	<10	<10			
Chlorobenzene	<10	<10			
1,3-Dichlorobenzene	<10	<10			
1,4-Dichlorobenzene	<10	<10			
1,2-Dichlorobenzene	<10	<10			

Note: UIP = Unidentified Peaks    TBQ = Trace Below Quantitation    NI = Not Indicated



#6984/1283

## CHAIN-OF-CUSTODY RECORD

29317

Project Name: KINGSBURY CONSTRUCTION	Reporting Address: GRIFIN	Billing Address: GRIFIN
Site Location: WAITSFIELD		
Endyne Project Number: GE KC 1341	Company: WILLIS DEE	Sampler Name: DON TOLU-A-GARU
	Contact Name/Phone #: WILLIS DEE	Phone #: DON TOLU-A-GARU

[illegible]

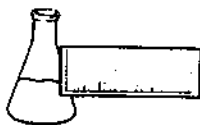
Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 10-21-98 10:00
Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 10/21 10:04

New York State Project: Yes No ☒

### Requested Analyses

Requested Analyses											
1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD <sub>5</sub>	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										





**ENDYNE, INC.**

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32 James Brown Drive  
Williston, Vermont 05495  
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FAX 879-7103

**REPORT OF LABORATORY ANALYSIS**

CLIENT: Griffin International

PROJECT CODE: GIKC1342

PROJECT NAME: Kingsbury Construction/#69841283REF. #: 129,652 - 129,653

DATE REPORTED: November 10, 1998

DATE SAMPLED: October 16, 1998

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody indicated proper sample preservation.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



**ENDYNE, INC.**

**Laboratory Services**

32 James Brown Drive  
Williston, Vermont 05495  
(802) 879-4333  
FAX 879-7103

**LABORATORY REPORT**

**TOTAL PETROLEUM HYDROCARBONS (TPH) BY MODIFIED EPA METHOD 8100**

DATE: November 10, 1998  
CLIENT: Griffin International  
PROJECT: Kingsbury Construction/#69841283  
PROJECT CODE: GIKC1342  
COLLECTED BY: Don Tourangeau  
DATE SAMPLED: October 16, 1998  
DATE RECEIVED: October 21, 1998

Reference #	Sample ID	Concentration (mg/kg) <sup>1</sup>
129,652	SS#1; 9:23	ND <sup>2</sup>
129,653	SS#2; 9:35	ND

**Notes:**

- 1 Values quantitated based on the response of #2 Fuel Oil. Method detection limit is 5.0 mg/kg.
- 2 None Detected



**ENDYNE, INC.**

32 James Brown Drive  
Williston, Vermont 05495  
(802) 879-4333

#69841283

## CHAIN-OF-CUSTODY RECORD

29317

Project Name: <i>KINGSBURY CONSTRUCTION</i> Site Location: <i>WAITSFIELD</i>	Reporting Address: <i>GRIFFIN</i>	Billing Address: <i>GRIFFIN</i>
Endyne Project Number: <i>GIKE1342</i>	Company: Contact Name/Phone #: <i>WILLIS DORE</i>	Sampler Name: Phone #: <i>SONE TOUR AUGER</i>

[illegible]

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 10-21-98 10:00
Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 10-21 10:04

New York State Project: Yes No ☒

### Requested Analyses

[illegible]